VistA Logo
INPATIENT MEDICATIONS 
TECHNICAL MANUAL/SECURITY GUIDE
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**INPATIENT MEDICATIONS**

**TECHNICAL MANUAL/**

**SECURITY GUIDE**

Version 5.0

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Revision History

Each time this manual is updated, the Title Page lists the new revised date and this page describes the changes. If the Revised Pages column lists “All,” replace the existing manual with the reissued manual. If the Revised Pages column lists individual entries (e.g., 25, 32), either update the existing manual with the Change Pages Document or print the entire new manual.

| **Date** | **Revised Pages** | **Patch Number** | **Description** |
| --- | --- | --- | --- |
| 02/11 | i, 53 62, 64, 65 | PSJ\*5\*226 | Added to RXC section Field 5, “Additive Frequency” in HL7 Ordering Fields; updated Front Door – IV Fluids table with Field 5; updated Back Door – IV Fluids table with Field 5; updated example.  (M. Vo/B. Tatum, Developers; M. Colyvas, Technical Writer) |
| 06/10 | i, [22-23](#p113_22) | PSJ\*5\*113 | Added routine PSGSICH1.  (R. Singer, DM; B. Thomas, Tech. Writer) |
| 02/10 | i, 23 | PSJ\*5\*214 | Added PSJQUTIL to the routine list in Section 5.1 for Patients on Specific Drug(s) Multidivisional Enhancements Project.  (C. Willette, DM; R. Silverman/D. Dertien, Tech Writer) |
| 12/09 | 22-23 | PSJ\*5\*222 | Added routine PSGOEF2.  (E. Wright, PM; S. B. Gilbert, Tech Writer) |
| 08/08 | vi, 23, 51-53, 57-58, 60-61, 63, 65, 65a-65b | PSJ\*5\*134 | Parameters for escaping special characters added. New HL7 messages added. New routines added. HL7 order fields table contains an asterisk for each field that has special escaping characters.  (S. Templeton, PM; G. O’Connor, Tech. Writer) |
| 02/07 | 74-76 | PSJ\*5\*178 | MED ROUTE now appears in larger font on IV labels from the Zebra bar code printer. Med ROUTE now prints on the IV labels for bar-code enabled printers, and it prints in larger font than surrounding text.  (R. Singer, PM; E. Phelps, Tech. Writer) |
| 09/06 | 23, 94 | PSJ\*5\*172 | Encapsulation Cycle II project: Added PSJ53P1 to the Routine List in Section 5.1. Added DBIA 4537 to DBIA list. Changed the date on the Title Page to December 1997.  (H. Whitley, PM; L. Woodson, TW) |
| 05/06 | v-viii  8a-8b  66-68b | PSJ\*5\*154 | In Section 2.2.2 Added “PRIORITIES FOR NOTIFICATION” field.  In Section 9.5, made correction to include the priority of ASAP in notifications. Added information regarding the three notifications parameters.  (C. Greening, PM; T. Dawson, Tech. Writer) |
| 12/2005 | 23 | PSJ\*5\*146 | Remote Data Interoperability (RDI) Project: Added PSJLMUT2 to the Routine List in Section 5.1.  (E. Williamson, PM; M. Newman, Tech. Writer) |
| 11/2005 | All | PSJ\*5\*163 | Encapsulation Cycle II project: Added PSJ59P5 to the Routine List in Section 5.1. Added DBIA 4819 to DBIA list. Deleted DBIAs 172, 634, and 1882 from the DBIA list.  Reissued entire document due to a page numbering issue.  (H. Whitley, PM; L. Woodson, TW) |

Preface

This technical manual is written for the Information Resources Management Service (IRMS) Chief/Site Manager and the Automated Data Processing Application Coordinator (ADPAC) for implementation and installation of the Inpatient Medications package. The main text of the manual outlines routine descriptions, file list, site configuration issues, variables, resource requirements, and package security.

(*This page included for two-sided copying*.)

Table of Contents

1. Introduction 1

2. Implementation and Maintenance 3

2.1. Installation 3

2.2. Inpatient Parameters 3

2.2.1. Fields from the PHARMACY SYSTEM File (#59.7) 4

2.2.2. Fields from the INPATIENT WARD PARAMETERS File (#59.6) 6

2.2.3. Fields from the INPATIENT USER PARAMETERS File (#53.45) 9

2.2.4. Fields from the IV ROOM File (#59.5) 10

2.2.5. Fields from the CLINIC DEFINITION File (#53.46) 14

3. Package Security 15

3.1. Option Security Keys 15

3.2. File Security 16

4. File List 17

4.1. Unit Dose File Diagram 18

4.2. IV File Diagram 19

5. Routines 21

5.1. Descriptions 21

5.2. Callable Routines 24

5.3. Routine Mapping 24

5.3.1. Do Not Map 24

5.3.2. Mapping Highly Recommended 25

5.3.3. Mapping Recommended 25

5.3.4. Deleting Inpatient Routines 26

6. Templates 27

6.1. Print Templates 27

6.2. Input Templates 27

6.3. List Templates 29

7. Exported Options 31

7.1. Stand-alone Options 31

7.2. Top-level Menus 31

7.2.1. Menu Assignment 31

7.2.2. Menu Placement 31

7.3. Options 32

8. Data Archiving and Purging 41

8.1. Archiving 41

8.2. Purging 41

8.2.1. Unit Dose Auto Purging 41

8.2.2. IV Auto Purging 41

8.2.3. Unit Dose Manual Purging – Temporarily Unavailable 42

8.2.4. IV Manual Purging – Temporarily Unavailable 43

9. Inpatient Medications and CPRS 45

9.1. Installation of the Protocols for CPRS 45

9.2. Converting 45

9.2.1. Order Conversion 45

9.2.2. Pick List Conversion 46

9.2.3. Order Set Conversion 46

9.2.4. Verification Data Conversion 46

9.3. Protocol Descriptions 47

9.4. Health Level Seven (HL7) Messaging 51

9.4.1. HL7 Ordering Fields 51

9.4.2. Order Event Messages 56

9.4.3. Special Escaping Characters 66

9.5. STAT, ASAP, and NOW Order Notification 66

9.5.1. PSJ STAT NOW PENDING ORDER Mail Group 67

9.5.2. PSJ STAT NOW ACTIVE ORDER Mail Group 68

9.5.3. Adding a Remote Member as a Subscriber 69

9.5.4. Setting Up Ward-Specific Mail Groups 69

10. Inpatient Medications and BCMA 69

10.1. API Exchange 69

10.2. Med Order Button 70

11. Interfacing with the Bar Code Label Printer 73

11.1. Hardware Set Up 73

11.2. Software Set Up 73

11.2.1. Zebra Printers 73

11.2.2. Dot Matrix and Laser Printers 75

11.3. Printed Bar Code IV Label Sample 76

12. Interfacing with the ATC 77

12.1. Pharmacy Set Up 77

12.1.1. Drug Set Up 77

12.1.2. Ward Group Set Up 77

12.2. Hardware Set Up 78

12.2.1. Device File Example 78

12.2.2. MUX Table Example 78

12.2.3. DECServer Examples 79

12.2.4. Wiring for CXA16 Card 79

12.2.5. ATC-HPS Configuration Set Up 80

12.2.6. Common Problems 81

13. Resource Requirements 83

13.1. Hardware 83

13.2. Disk Space 83

13.2.1. Routines 83

13.2.2. Data 83

13.3. Journaling Globals 83

13.4. Translating Globals 84

13.5. Nightly Background Jobs 84

13.6. Queuing and Printing across CPUs 84

14. External Relationships 85

14.1. Packages Needed to Run Inpatient Medications 85

14.2. Unit Dose Medications and Ward Stock 85

14.3. Unit Dose Medications and Drug Accountability 85

14.4. Calls Made by Inpatient Medications 86

14.5. Introduction to Integration Agreements and Entry Points 86

15. Internal Relationships 100

16. Internal Calls and Variables 100

16.1. Package-Wide Variables 103

16.1.1. Inpatient Sign-on Variables 103

16.1.2. Standard Variables Used Throughout the Package 105

16.1.3. IV Sign-on Variables 107

16.1.4. Variables 108

17. On-line Documentation 110

17.1. On-line Help 110

17.2. Printing Data Dictionaries 110

18. Additional Information 112

18.1. SAC Exemptions 112

18.2. IV Ward List 112

18.3. IV Manufacturing List 113

18.4. IV Suspense List 114

18.5. Unit Dose “Defaults” 117

18.5.1. Order Start Date/Time Calculation 117

18.5.2. Stop Date/Time: Calculation 118

18.5.3. Patient’s Default Stop Date/Time 119

18.5.4. Pick List Wall 120

19. Glossary 122

20. Appendix A: Inpatient Medication Orders for Outpatients–Phase I & II and Inpatient Medication Reqs for SFG IRA–Phase II 136

20.1. Introduction 136

20.2. Inpatient Medication Orders for Outpatients – Phase I & II 137

20.2.1. Inpatient Medications V. 5.0 137

20.2.2. Order Entry Results Reporting V. 3.0 (CPRS) 139

20.2.3. Scheduling V. 5.3 141

20.3. Inpatient Medication Requirements for SFG IRA – Phase II 142

20.3.1. Inpatient Medications V. 5.0 and Pharmacy Data Management V. 1.0 142

20.3.2. Order Entry Results Reporting V. 3.0 (CPRS) 143

20.4. Installation 144

20.4.1. Overview 144

20.4.2. Post-Installation Setup 144

| ***SEG*** | ***SEQ*** | ***FIELD NAME*** | ***EXAMPLE*** | ***HL7 TYPE*** |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| **{ RXC }** | 1 | RX Component Type | B | table 166 |
|  | 2 | Component Code\* | ^^^4132^D5 W NS^99PSD | coded element |
|  | 3 | Component Amount | 1 | numeric |
|  | 4 | Component Units\* | ^^^PSIV-1^ML^99OTH | coded element |
|  | 5 | Additive Frequency | 1, 3 | string |
|  |  |  |  |  |
| **{ OBX }** | 1 | Set ID | 1 | set ID |
|  | 2 | Value Type | TX | table 125 |
|  | 3 | Observation ID | ^^^38^Critical Drug-Drug interaction^99OCX | coded element |
|  | 5 | Observation Value | Critical drug-drug interaction Aspirin-Warfarin | string |
|  | 14 | Date/time of Observation | 199606130813 | timestamp |
|  | 16 | Observer | 10 | composite ID |
|  |  |  |  |  |
| **NTE** | 1 | Set ID | 1 | set ID |
|  | 2 | Source of Comment | P | table 105 |
|  | 3 | Comment | Worth the risk | formatted text |
|  |  |  |  |  |
| **ZRX** | 1 | Previous Order # | 2355 | numeric |
|  | 2 | Nature of Order | W | set of codes |
|  | 3 | Reason Order Created | N | set of codes |
|  | 4 | Routing | W | set of codes |
|  | 5 | Current User\* | DUZ^NAME^99NP | composite ID |
|  | 6 | IV Identifier | IV | string |
|  |  |  |  |  |
| **ZSC** | 1 | Service Connected | SC | coded element |
| **}** |  |  |  |  |

\*- Fields marked with an asterisk require special escaping characters in order to send and receive the correct data contained in an HL7 message. See **Special Escaping Characters** for details.

\*\*-RXC Segment Field 5 “Additive Frequency” only applies for additives to specify IV bag information.

Note icon**Note:** The following are definitions of some of the data fields under the FIELD NAME column.

SENDING APPLICATION is the name of the VistA package generating the message; RECEIVINGAPPLICATION is the name of the VistA package that is the intended recipient of the message. SENDING FACILITY and RECEIVING FACILITYare the station numbers.

PATIENT ID is the patient IEN in the PATIENT file (#2).

**Front Door - IV Fluids**

IV fluid orders use a RXC segment to contain information about solutions and additives. Therefore, a special code is sent in a RXO segment;1 to identify the order as an IV order (PS-1^IV Order^99OTH). Since RXC segments are used, the give fields in a RXO segment are unnecessary.

| ***Action*** | ***Request from OE/RR*** | ***Pharmacy accepts*** | ***Pharmacy rejects*** |
| --- | --- | --- | --- |
|  |  |  |  |
| **Protocol** | OR EVSEND PS | PS EVSEND OR | PS EVSEND OR |
| **Order Control** | NW (new order)  XO (changed order) | OK (accepted)  XR (new order) | UA (unable to accept)  UX (unable to change) |
| **HL7 Fields** | MSH: 1,2,3,4,5,6,7,9  PID: 3,5  PV1: 2,3  ORC: 1,2,7,9,10,12,15,16  RXO: 1,2  NTE: 1,2,3  RXC: 1,2,3,4, 5  OBX: 1,2,3,5,14,16  ZRX: 1,2,3 | MSH: 1,2,3,4,9  PID: 3,5  PV1: 2,3  ORC: 1,2,3,5 | MSH: 1,2,3,4,9  PID: 3,5  PV1: 2,3  ORC: 1,2,3,12,15,16 |
|  |  |  |  |
| **Protocol** | OR EVSEND PS |  |  |
| **Order Control** | ZV (verified) |  |  |
| **HL7 Fields** | MSH: 1,2,3,4,5,6,7,9  PID: 3,5  PV1: 2,3  ORC: 1,2,3,11,15 | There is no return event. |  |
|  |  |  |  |
| **Protocol** | OR EVSEND PS | PS EVSEND OR | PS EVSEND OR |
| **Order Control** | CA (cancel)  DC (discontinue)  HD (hold)  RL (release)  SS (send status) | CR (canceled)  DR (discontinued)  HR (held)  OR (released)  SC (status update) | UC (unable to cancel)  UD (unable to dc)  UH (unable to hold)  UR (unable to release)  DE (data errors) |
| **HL7 Fields** | MSH: 1,2,3,4,5,6,7,9  PID: 3,5  PV1: 2,3  ORC: 1,2,3,10,12,15,16 | MSH: 1,2,3,4,9  PID: 3,5  PV1: 2,3  ORC: 1,2,3,5 | MSH: 1,2,3,4,9  PID: 3,5  PV1: 2,3  ORC: 1,2,3,16 |

**Example: POTASSIUM CHLORIDE INJ,SOLN FOR IV ORDERS 125 MEQ in**

**SODIUM INJ,SOLN FOR IV ORDERS 1000 ml 100 ml/hr**

***New Order CPRS Continuous***

MSH|^~\&|ORDER ENTRY|13000|PHARMACY|13000|20080304170

224-0600||ORM

PID|||750||PSJPATIENT,TESTPAT-FIVE

PV1||I|5|||||||||||||||||||||||||||||||||||||||||

ORC|NW|12615;1^OR|||||^^^^^R||200803041702-0600|11884

||11884|||20080304170224-0600|I^POLICY^99ORN^^^

RXO|^^^PS-1^IV^99OTH|333 ml/hr

RXR|^^^14^INTRAVENOUS^99PSR

RXC|B|^^^196^DEXTROSE INJ,SOLN ^99PSP|50|^^^PSIV-1^ML

^99OTH

RXC|A|^^^435^MORPHINE INJ ^99PSP|33|^^^PSIV-1^ML^99OT

H

ZRX||I|N|||C

***New Order CPRS Intermittent***

MSH|^~\&|ORDER ENTRY|13000|PHARMACY|13000|20080304170

224-0600||ORM

PID|||750||PSJPATIENT,TESTPAT-FIVE

PV1||I|5|||||||||||||||||||||||||||||||||||||||||

ORC|NW|12616;1^OR|||||^BID&01-13^^^^R||200803041702-0

600|11884||11884|||20080304170224-0600|I^POLICY^99ORN^^^

RXO|^^^PS-1^IV^99OTH|

RXR|^^^15^INTRAMUSCULAR^99PSR

RXC|B|^^^196^DEXTROSE INJ,SOLN ^99PSP|500|^^^PSIV-1^M

L^99OTH

RXC|A|^^^281^FUROSEMIDE INJ,SOLN ^99PSP|33|^^^PSIV-4^

MG^99OTH

ZRX||I|N|||I

**Back Door - IV Fluids**

| ***Action*** | ***Event from Pharmacy*** | ***OE/RR accepts*** | ***OE/RR rejects*** |
| --- | --- | --- | --- |
|  |  |  |  |
| **Protocol** | PS EVSEND OR | OR EVSEND PS | OR EVSEND PS |
| **Order Control** | SN (send number)  ZC (conversion) | NA (number assigned) | DE (data errors) |
| **HL7 Fields** | MSH: 1,2,3,4,9  PID: 3,5  PV1: 2,3  ORC: 1,3,5,9,10,12,15,16  RXE: 1,23,24  RXC: 1,2,3,4, 5  ZRX: 1,2,3,5,6 | MSH: 1,2,3,4,5,6,7,9  PID: 3,5  PV1: 2,3  ORC: 1,2,3 | MSH: 1,2,3,4,5,  6,7,9  PID: 3,5  ORC: 1,2,3,16 |
|  |  |  |  |
| **Protocol** | PS EVSEND OR |  | OR EVSEND PS |
| **Order Control** | SC (finished)  XX (order changed) |  | DE (data errors) |
| **HL7 Fields** | MSH: 1,2,3,4,9  PID: 3,5  PV1: 2,3  ORC: 1,2,3,5,9,10,12,15,16  RXE: 1,23,24  NTE: 1,2,3  RXC: 1,2,3,4, 5  ZRX: 1,2,3,5,6 | There is no return event. OE/RR must accept the instruction from Pharmacy. | MSH: 1,2,3,4,5,  6,7,9  PID: 3,5  ORC: 1,2,3,16 |
|  |  |  |  |
| **Protocol** | PS EVSEND OR |  | OR EVSEND PS |
| **Order Control** | OC (cancel)  OD (discontinue)  OH (hold)  OR (release)  SC (status change) |  | DE (data errors) |
| **HL7 Fields** | MSH: 1,2,3,4,9  PID: 3,5  PV1: 2,3  ORC: 1,2,3,5,9,10,12,15,16  RXE: 1  ZRX: 2,5 | There is no return event. OE/RR must accept the instruction from Pharmacy. | MSH: 1,2,3,4,5,  6,7,9  PID: 3,5  ORC: 1,2,3,16 |

**Example: POTASSIUM CHLORIDE INJ,SOLN FOR IV ORDERS 125 MEQ in**

**SODIUM INJ,SOLN FOR IV ORDERS 1000 ml 100 ml/hr**

***New Order Continuous***

MSH|^~\&|PHARMACY|500|||||ORM|||||||||

PID|||750||PSJPATIENT,TESTPAT-FIVE|||||||||||||||||

PV1||I|5^||||||||||||||||3351||||||||||||||||||||||||

|||||||

ORC|SC|12619^OR|46V^PS||CM||^&^^^^^||200803041719-060

0|11884^PROVIDER,INPATIENT||11884^PROVIDER,INPATIENT|||200803041900-0600|W^Written^99ORN^^^||

RXO|^^^435^MORPHINE INJ^99PSP||||||||||||||||

RXE|^&^^200803041900-0600^200803100000-0600^|||||||||

||||11884^PROVIDER,INPATIENT^99NP|||||||^^99PSA^^^||300|^^^^ml/hr^PSU||

RXC|A|^^^435^MORPHINE^99PSP|20|^^^PSIV-1^ML^99OTH|1,3|||

||||||||||||||||

RXC|B|^^^196^DEXTROSE^99PSP|1000|^^^PSIV-1^ML^99OTH||

||||||||||||||||||

RXR|^^^14^INTRAVENOUS^99PSR|||

ZRX||W|N||11884^PROVIDER,INPATIENT^99NP|C

***New Order Intermittent***

MSH|^~\&|PHARMACY|500|||||ORM|||||||||

PID|||750||PSJPATIENT,TESTPAT-FIVE|||||||||||||||||

PV1||I|5^||||||||||||||||3351||||||||||||||||||||||||

|||||||

ORC|SC|12620^OR|47V^PS||CM||^Q4H&01-05-09-13-17-21^^^

^^||200803041721-0600|11884^PROVIDER,INPATIENT||11884^PROVIDER,INPATIENT|||200803041700-0600|W

^Written^99ORN^^^||

RXO|^^^281^FUROSEMIDE INJ,SOLN^99PSP||||||||||||||||

RXE|^Q4H&01-05-09-13-17-21^^200803041700-0600^2008030

60000-0600^|||||||||||||11884^PROVIDER,INPATIENT^99NP|||||||^01-05-09-13-17-21^99PSA^^^

||INFUSE OVER 300 MINUTES|||

RXC|A|^^^281^FUROSEMIDE^99PSP|250|^^^PSIV-4^MG^99OTH|1,3

|||||||||||||||||||

RXC|B|^^^196^DEXTROSE^99PSP|1000|^^^PSIV-1^ML^99OTH||

||||||||||||||||||

RXR|^^^160^IV PIGGYBACK^99PSR|||

ZRX||W|N||11884^PROVIDER,INPATIENT^99NP|I